

Abstract

Thin-layer LED chip and method for making same

A thin-layer LED chip (5) is claimed, comprising an epitaxial layer sequence (6) that is disposed on a carrier element (2) and contains an electromagnetic-radiation-generating active region (8), and a reflective layer (3) that is disposed on a principal surface of the epitaxial layer sequence (6) facing toward the carrier element (2) and reflects at least a portion of the electromagnetic radiation generated in the epitaxial layer sequence (6) back thereinto, in which a structured layer (1) containing a glass material is applied to a radiation extraction surface (7) of the epitaxial layer sequence (6) facing away from said carrier element (2) and has a structure that includes mutually adjacent protuberances (5) that taper in the direction away from the radiation extraction surface (7) and have a lateral grid size that is smaller than one wavelength of an electromagnetic radiation emitted from the epitaxial layer sequence (6). The structured layer (1) is advantageously applied as spin-on glass and structured by grayscale lithography.

Fig. 1d)